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ABSTRACT

Suggesting combining poetry and science learning, this collection of materials maintains that the natural intersection of science and poetry can be used to stimulate thinking, create interest, and explore new possibilities. The collection includes: (1) the South Carolina Basic Skills Assessment Program's Objectives Reading/Science Match; (2) examples of "shape" poems (cinquain, quintet, parts of speech poems, noun verse, diamante and picture poems); examples of structured poems (name, number, alphabet, couplet, haiku, limerick, quatrain, and tanka; (3) examples of fun poems; and (4) activity sheets to assist students in writing their own poems. A list of 26 resources is attached. (RS)

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Poetry and Science: The Dynamic Duo

International Reading Association

May 10, 1991 Las Vegas

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Overview

Rationale

Reading/Science Correlation

Fun Poems

Popcorn

Shape Poems

Structured Poems

Celebrations

Brainstorming Techniques

Resources

Why combine poetry and science learning?

Poetry uses

description.
interpretation.
communication.
prediction.
identification.
observations.
etc.

Science uses

description.
interpretation.
communication.
prediction.
identification.
observations.
etc.

Poetry delights students with its creative and rhythmic descriptions and observations. It entices them into the world of language. Why not use this language to cultivate another natural interest? Studying the world around reading and writing about it through poetry. Poetry is a natural motivator for even the most reluctant students.

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POETRY
N
C
E

Use the natural intersection of science and poetry to stimulate thinking, create interest, and explore new possibilities!

South Carolina Basic Skills Assessment Program

Objectives Reading/Science Match

Reading	Science
Decoding and Word Meaning	Identify Describe Order Likeness Differences
Details	Identifying Information
Main Idea	Interpret Data
Reference Usage	Communication Record Observations Identifying Information
Inferences	Record Observations Infer Identify Information Communication Predicting
Analysis of Literature	Classify Identify variables Define variables Formulate hypothesis Test hypothesis

South Carolina Basic Skills Assessment Program
Objectives Science/Reading Match

Basic Process Skills

SCIENCE	READING
Making qualitative and quantitative observations	Naming objects, events and people
	Discriminate shapes
	Discriminate sounds
	Discriminating syllables and accents
	Recognizing letters
	Recognizing words
	Recognizing common prefixes
	Recognizing common suffixes
	Recognizing common base words
Classifying objects, organisms and events	Isolating important characteristics
	Enumerating characteristics
	Using appropriate terminology
	Using synonyms
	Comparing characteristics
	Contrasting characteristics
	Ordering, sequencing
	Arranging ideas
	Considering multiple factors
Making inferences about objects, organisms or events	Isolating important characteristics
	Enumerating characteristics
	Considering multiple factors
	Looking for potential relationships
Making predictions about objects, organisms or events	Isolating important characteristics
	Enumerating characteristics
	Considering multiple factors
	Looking for potential relationships
Communicating information	Surveying reference materials
	Collecting information
	Developing outlines
	Using graphic aids
	Organizing ideas
	Illuminating significant factors
	Reporting information

Shape Poems - lines are written to conform to specific word counts, syllables counts, types of words or a combination. The poems are arranged to make a geometric shape or the shape of the object of the poem.

Examples are cinquain, quintet, parts of speech, noun verse, diamante and picture poems.

Cinquain - A poem of five lines.

Line 1 (same as title) has one word - noun
Line 2 describes the title in two words - description of title
Line 3 has three words that express action - 3 verbs
Line 4 has four words that express feeling - 4-word phrase
Line 5 is one word referring to the title - noun

winter
icy, cold
piercing, chilling, freezing
changing greenness into white
winter

Variation:

Count syllables

Line 1 has 2 syllables
Line 2 has 4 syllables
Line 3 has 6 syllables
Line 4 has 8 syllables
Line 5 has 2 syllables

splashes
dripping, wetting
thundering, lightning, loud
bringing new freshness to the ground
raining

Quintet - syllabic verse that tells a story in five lines

Line 1 is when with 3 syllables
Line 2 is where with 5 syllables
Line 3 is what with 7 syllables
Line 4 is activity with 9 syllables
Line 5 is thought with 3 syllables

during fall
deep inside the woods
busy squirrels rush about
gathering nuts and berries galore
winter feast

Parts of Speech

Line 1 has an article and one noun
Line 2 has one adjective, one conjunction, and another adjective
Line 3 has a verb, a conjunction, and another verb
Line 4 has one adverb
Line 5 has one preposition and one object of the preposition

The tree
Gnarled and spooky
Creeking and groaning
Eerily
Behind me.

Noun verse

Line 1 is a noun
Line 2 is two adjectives
Line 3 is two "ing" words
Line 4 is a synonym of the title

butterflies
delicate, graceful
floating, hovering
monarchs

Diamante - A diamond shaped poem which provides a contrast between two opposite objects.

Line 1 is the topic
Line 2 has 2 adjectives
Line 3 has 3 "ing" words
Line 4 has 2 nouns about the topic/and 2 nouns about the opposite
Line 5 has 3 "ing" words about the opposite of the topic
Line 6 is the opposite of the topic

jungle
abundant, soggy
growing, stretching, living
decaying, drying, dying
desert

Picture Poem, Painted Poem, Shape Poem or Concrete Poem - written in form of object

Line 1 - subject and action word or words
Line 2 - 2 or 3 descriptive words
Line 3 - metaphor of the subject

A small spot of color sits on a flower to rest in the sun
Sips nectar through its curly straw-like tongue
little scales of color make a jewel-like design
antennae
antennae

antennae
small spot of color sits on a flower to rest in the sun
little scales of color make a jewel-like design
antennae
sips nectar through its curly straw-like tongue

Structured Poems - Poems which rhyme, have specific syllables per line, have lines which begin with specific letters or words, or a combination.

Examples are name, number, alphabet, couplet, haiku, limerick, quatrain, and tanka.

Name - written about a particular person, place, or thing. The letters of the name are written vertically in acrostic form. A descriptive sentence or phrase is written beside each letter.

ARTHROPODA
Animals are we
Regions in our body you can see
The parts are paired
Having joints and bending
Right and left are mirror images
Oceans have lobster, crayfish, crab and shrimp
Perhaps you see the tick, centipede or millipede
Of course all the insects
Did you get all those?
And yes the spider too!

Number - like the name poem except uses numbers instead of letters.

1957
1 - One Sputnik not ours
9 - Nine or ten we'll have one
5 - Five times two Apollo orbits the earth
7 - Seven times Apollo lands on the moon

Variations:

Ten lines - the first line has one word, the second has two, etc.

Arthropoda
Bilaterial symmetry
Hard, jointed exoskeletons
Segmented bodies with regions
Pairs of movable, jointed appendages
Tick, centipede, millipede, insects are part
Lobster, crayfish, crab, shrimp all belong here
And yes the spider belongs to us here
On the land, in the water, in the ocean
Now you have all the facts about the phyllum arthropoda

Specific number - each line has the number of syllables shown by that line's number

Arthropoda
Tick
Lobster
Centipede
Crab and shrimp too
Oceans, land and air
Millipede and insects
Spiders going up and down
Arthropoda is our phyllum
Jointed appendages in mirror pairs
Exoskeleton for our protection

Alphabet - lines are in alphabetical order

Arthropoda is my name
Bilateral symmetry is my game
Crabs and crayfish we are one
Distinct regions in our bodies you will find
Exoskeleton we all do have
Flies and other insects we belong

Couplet - two lines that rhyme with about the same number of syllables. Sets of couplets make stanzas in a poem.

The Popcorn Story is written in couplets.

Ten white kernels of corn to pop.
Watch them dance as they get hot!

Haiku - describes a single detail in nature.

Line 1 has 5 syllables
Line 2 has 7 syllables
Line 3 has 5 syllables

The white, fuzzy coat
Which covers the sleeping ground
Is a Jack Frost gift

Limerick - Counted syllables, rhyme, and specific action

Line 1,2 and 5 have 7 - 10 syllables and rhyme
Line 3 and 4 have 5 - 7 syllables and rhyme

Line 1 state the situation
Line 2 what happened
Line 3 what went wrong
Line 4 what went wrong
Line 5 result

I'm hungry, fix me something, don't be late!
Let's get the popcorn popper, it's fate.
No popcorn off to the store
Flat tire oh no more
No popcorn so potato chips we ate

Quatrain - counted syllables with rhyme

Line 2 and 4 rhyme and have about the same number of syllables
Line 1 and 3 may rhyme or not but should have about the same number of syllables

Tanka - counted syllables without rhyme

Line 1 and 3 have 5 syllables
Line 2, 4 and 5 have 7 syllables

I'm launched from your hand,
You send me flying so high
I'm up to the roof,
Then spiraling down, I swoop
And dive into the trash can.

Fun - Poems just for fun.

Examples are hymes, five senses and based on poems.

Hymes - a formula for writing a poem developed by Lucia and James Hymes in Hooray for Chocolate. The poem uses adjectives and nouns in a particular pattern. It is especially appropriate for an item with different varieties.

noun,
noun,
noun,
adjective noun,
adjective noun,
adjective adjective adjective noun,
adjective adjective adjective noun.
Those are just a few.
adjective noun,
adjective noun,
adjective adjective adjective noun,
adjective noun, too.
adjective noun,
adjective noun,
Don't forget adjective noun.
Last of all, best of all.
I like adjective noun!

Beans,
Beans,
Beans,
Baked beans,
Butter beans,
Big fat lima beans,
Long thin string beans.
Those are just a few.
Green beans,
Black beans,
Big fat kidney beans,
Jumping beans, too,
Garbanzo beans,
Pinto beans,
Don't forget navy beans.
Last of all, best of all.
I like jelly beans!

Five Senses - a poem using your five senses to describe an emotion.
May be varied by using a person, place, or thing instead of an emotion.

Line 1 tell what color the emotion is
Line 2 tell what the emotion sounds like
Line 3 tell what it tastes like
Line 4 tell what it smells like
Line 5 tell what the emotion looks like
Line 6 tell how it makes you feel

Emotion - Title of Poem

_____ is _____ as _____ .

It sounds like _____ .

It tastes like _____ .

And smells like _____ .

_____ looks like _____ .

It makes you feel _____ .

Anger

Anger is black as midnight.
It sounds like spattering grease.
It tastes like sand in a sandwich.
And smells like a wet dog.
Anger looks like a volcano blowing itself apart.
It makes you feel powerful.

Based on Poems - poems which take their pattern from other poems.

If I Were In Charge Of The World

Fifteen, Maybe Sixteen Things To Worry About

Write Your Own!

Reread *"If I Were In Charge Of The World."* Use the poem pattern to write your own *"If I Were In Charge Of The World"* poem.

If I Were In Charge Of The World

If I were in charge of the world

I'd cancel _____

_____

_____, and also

_____

If I were in charge of the world

There'd be _____

_____, and

_____

If I were in charge of the world

You wouldn't have _____.

You wouldn't have _____.

You wouldn't have _____.

Or _____.

You wouldn't even have _____.

If I were in charge of the world

_____.

_____.

And a person who sometimes forgot _____,

And sometimes forgot _____,

Would still be allowed to be

In charge of the world.

Write Your Own!

Reread *"If I Were In Charge Of The World."* Use the poem pattern to write your own *"If I Were In Charge Of The World"* poem.

If I Were In Charge Of The World

If I were in charge of the world

I'd cancel _____

_____

_____, and also

_____

If I were in charge of the world

There'd be _____

_____, and

_____

If I were in charge of the world

You wouldn't have _____.

You wouldn't have _____.

You wouldn't have _____.

Or _____.

You wouldn't even have _____.

If I were in charge of the world

_____.

_____.

And a person who sometimes forgot _____,

And sometimes forgot _____,

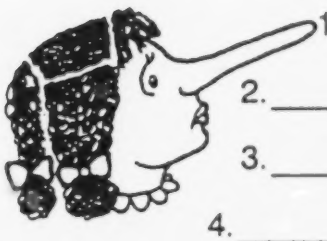
Would still be allowed to be

In charge of the world.

Write Your Own!

As a class, reread "Fifteen, Maybe Sixteen, Things To Worry About." Discuss which things in the poem also cause worry for your classmates and which things do not. Work together to create a list of your own fifteen or sixteen things that nearly all of you worry about.

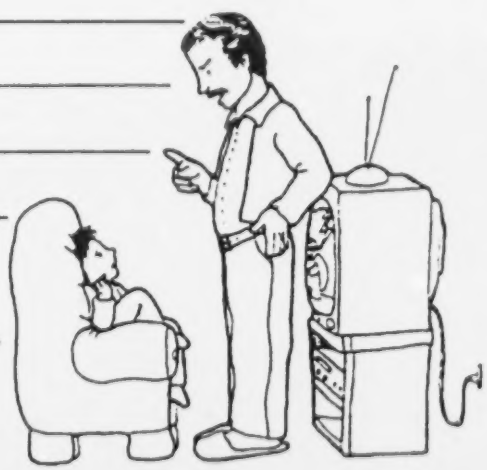
"FIFTEEN, MAYBE SIXTEEN, THINGS WE WORRY ABOUT"



1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____

and maybe

16. _____



Resources

Title	Author	Publisher
AIMS (Activities Integrating Math & Science)		AIMS Education Foundation
Guessing Jar, Primarily Bears, Book 1, pg. 77	How Does Your Corn Pop?, Guide into Winter, pg. 5	
Calliope	Greta B. Lison, Ed. D. Jane A. Romatowski, Ed. D.	Good Apple Inc.
Complete Writing Lessons (For the Middle Grades)	Marjorie Frank	Incentive Publications, Inc.
Complete Writing Lessons (For the Primary Grades)	Marjorie Frank	Incentive Publications, Inc.
Creature Capers	Jeffrey Copeland	The Perfection Form Company
Broccoli and Bubble Gum	Jeffrey Copeland	The Perfection Form Company
Hiccups and Giggles	Jeffrey Copeland	The Perfection Form Company
Horrible, Hairy, Scaly & Scary	Dorothy Daniel & Jane Summers	The Perfection Form Company
Literature & Critical Thinking	John and Patty Carratello	Teacher Created Materials, Inc.
Potatoes • Popcorn • Pigs	Linda Holliman	Evan-Moor
Pint-Sized Poetry (Sweet and Humorous Poetry for Younger Children)	David Zaslow	Good Apple, Inc.
Plays & Poems (Shared Reading Activities for the Classroom)	Barbara Gruber & Sue Gruber	Frank Schaffer Publicaitons, Inc.
Poetry Patterns	Charla Jones	Book Lures, Inc.
Poetry Patterns	Jo Ellen Moore & Joy Evans	Evan-Moor Corp.
Poetry Portfolio	Julia R. Alarie & Elizabeth Conlon	The Monkey Sisters, Inc.
Science Through Children's Literature	Carol Butzow & John Butzow	Libraries Unlimited
Spring Activities	JoEllen Moore&Joy Evans	An Evan-Moor Publication
Take A Bite Out Of Rhyme	Cindi Nolen Allen, Ph. D.	Educational Impressions
The Art of Teaching Writing	Lucy McCormick Calkins	Heinemann Ed. Books, Inc.
The Frog and Toad Thinking Book	Nancy Polette	Book Lures, Inc.
The Poetry Corner	Arnold Cheyney	Good Year Books
Using Poetry (Listening*Speaking*Reciting*Writing)	Barbara Gruber & Sue Gruber	Frank Schaffer Publications, Inc.
When You've Made It Your Own...	Gregory A. Denman	Heinemann Ed. Books, Inc.
Writing and Art Go Hand in Hand to Teach Language Skills	Diane M. Bonica	Incentive Publications, Inc.
Writing Poetry With Children	Jo Ellen Moore & Joy Evans	Evan-Moor Corp.

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